

Index to Volume 62

Author Index

- Añón, M. C. See C. E. Lupano, 174
- Abboud, A. M., R. C. Hoseney, and G. L. Rubenthaler. Factors affecting cookie flour quality, 130
- , G. L. Rubenthaler, and R. C. Hoseney. Effect of fat and sugar in sugar-snap cookies and evaluation of tests to measure cookie flour quality, 124
- Afework, S. See Y. Pomeranz, 41
- Altosaar, I. See L. S. Robert, 276
- Anderson, D. M. See M. Fenton, 67
- Anderson, O. D. See F. C. Greene, 398
- Anderson, R. A., A. J. Peplinski, C. L. Storey, G. N. Bookwalter, and L. T. Black. Distribution of ethylene dibromide residues in whole corn and milled corn products, 198
- Andrews, L. See L. M. Seitz, 467
- Asp, N.-G. See W. Frølich, 238
- Ballance, G. M. Purification of a specific endo-beta-glucanase from *Bacillus subtilis* for beta-glucan quantitation, 148
- Barquín-Carmona, J. See O. Paredes-López, 427
- Bayoumi, M. I. See H. A. Khachadourian, 416
- Bechtel, D. B., L. A. Kaleikau, R. L. Gaines, and L. M. Seitz. The effects of *Fusarium graminearum* infection on wheat kernels, 191
- , See R. L. Gaines, 25, 35
- Behnke, K. C. See J. W. Lawton, 267
- Bekes, F. See O. M. Lukow, 419; U. Zawistowska, 284, 340
- Bietz, J. A. High performance liquid chromatography: How proteins look in cereals, 201
- , and L. A. Cobb. Improved procedures for rapid wheat varietal identification by reversed-phase high-performance liquid chromatography of -liadin, 332
- , and D. D. Kasarda. Introduction to symposium on protein improvement in cereals and oilseeds through traditional and modern genetic approaches, 309
- Black, L. T. See R. A. Anderson, 198
- Bock, M. A. See G. S. Ranhotra, 117
- Bolte, L. C. See K. F. Finney, 83, 454; Y. Pomeranz, 47
- Bookwalter, G. N. See R. A. Anderson, 198
- Bowland, J. P. See M. Fenton, 67
- Brabec, D. See F. S. Lai, 178
- Brady, P. L., and S. M. Mayer. Correlations of sensory and instrumental measures of bread texture, 70
- Bruinsma, B. See M. Stroh, 103
- Burgoon, A. C., Ikeda, H. S., and Tanner, S. N. A method for detecting adulteration in durum wheat pasta by polyacrylamide gel electrophoresis, 72
- Bushuk, W. See O. M. Lukow, 419; H. D. Sapirstein, 372, 377, 392; U. Zawistowska, 284, 340
- Campbell, C. G. See G. Mazza, 31
- Champagne, E. T., R. M. Rao, J. A. Liuzzo, J. W. Robinson, R. J. Gale, and F. Miller. Solubility behaviors of the minerals, proteins, and phytic acid in rice bran with time, temperature, and pH, 218
- , ———, and ———. The interactions of minerals, proteins, and phytic acid in rice bran, 231
- Choto, C. E., Morad, M. M., and Rooney, L. W. The quality of tortillas containing whole sorghum and pearled sorghum alone and blended with yellow maize, 51
- Chung, D. S. See N. H. Oh, 437
- Chung, H. See K. Kulp, 55
- Clements, R. L. See L. M. Seitz, 467
- Cobb, L. A. See J. A. Bietz, 332
- Cooper, D. B. See G. L. Lookhart, 19
- Covarrubias-Alvarez, M. M. See O. Paredes-López, 427
- Czuchajowska, Z. See Y. Pomeranz, 108
- Davis, A. B. See C. S. Lai, 293, 423; J. W. Lawton, 267
- Davis, E. A. See B. J. Zylema, 447
- Dayton, A. D. See P. A. Redlinger, 223
- Dexter, J. E., D. G. Martin, K. R. Preston, K. H. Tipples, and A. W. MacGregor. The effect of frost damage on the milling and baking quality of red spring wheat, 75
- Deyoe, C. W. See N. H. Oh, 431, 441
- Doerry, W. See K. Kulp, 55
- Doescher, L. C., and R. C. Hoseney. Saltine crackers: Changes in cracker sponge rheology and modification of a cracker-baking procedure, 158
- , and ———. Effect of sugar type and flour moisture on surface cracking of sugar-snap cookies, 263
- Donelson, J. R. See C. S. Gaines, 60, 63, 134
- Dubash, P. J. See C. F. Fernandes, 413
- Endo, S., K. Tanaka, and S. Nagao. Studies on dough development. II. Effects of mixing apparatus and mixing speed on the rheological and analytical properties of heated dough, 272
- Fenton, M., D. M. Anderson, P. A. Thacker, and J. P. Bowland. A method for separating light and dark kernels of winter wheat (*Triticum aestivum* L.) based on density, 67
- Fernandes, C. F., P. J. Dubash, and C. E. Walker. Accelerated breadmaking process at two fermentation temperatures, 413
- Fernandez, A., R. Strohine, and J. Tuite. Mold growth and carbon dioxide production during storage of high-moisture corn, 137
- Finney, K. F., and L. C. Bolte. Experimental micromilling: Reduction of tempering time of wheat from 18–24 hours to 30 minutes, 454
- , E. G. Heyne, M. D. Shogren, L. C. Bolte, and Y. Pomeranz. Functional properties of some European wheats grown in Europe and Kansas, 83
- , See Y. Pomeranz, 47
- Finney, P. L. Effect of wheat variety on the relationship between falling numbers and alpha-amylase activity, 258
- , S. Henry, and H. Jeffers. Effect of wheat variety, flour grinding, and egg yolk on whole wheat bread quality, 170
- Frølich, W., and N.-G. Asp. Minerals and phytate in the analysis of dietary fiber from cereals. III, 238
- Gaines, C. S. Associations among soft wheat flour particle size, protein content, chlorine response, kernel hardness, milling quality, white layer cake volume, and sugar-snap cookie spread, 290
- , and J. R. Donelson. Influence of certain flour quality parameters and postmilling treatments on size of angel food and high-ratio white layer cakes, 60
- , and ———. Effect of varying flour protein content on angel food and high-ratio white layer cake size and tenderness, 63
- , and ———. Evaluating cookie spread potential of whole wheat flours from soft wheat cultivars, 134
- Gaines, R. L., D. B. Bechtel, and Y. Pomeranz. Endosperm structural and biochemical differences between a high-protein amphiploid wheat and its progenitors, 25
- , ———, and ———. A microscopic study on the development of a layer in barley that causes hull-caryopsis adherence, 35
- , See D. B. Bechtel, 191
- Gale, R. J. See E. T. Champagne, 218, 231
- Gangopadhyay, S. See M. N. Sahay, 80
- Gautier, M.-F. See F. C. Greene, 398
- Gebre-Egziabher, A. See A. K. Sumner, 112
- Gelroth, J. A. See G. S. Ranhotra, 117, 476
- Gordon, J. See B. J. Zylema, 447
- Greene, V. C., L. D. Anderson, J. C. Litts, and M.-F. Gautier. Control of wheat protein biosynthesis, 398
- Grider, J. A. See B. J. Zylema, 447
- Hamada, A. S. See K. Khan, 310
- Henry, S. See P. L. Finney, 170
- Heyne, E. G. See K. F. Finney, 83
- Hill, R. D. See R. J. Weslake, 120
- Holt, L. M. See P. I. Payne, 319
- Holy, J. See D. M. Peterson, 366
- Hoseney, R. C. See A. M. Abboud, 124, 130; L. C. Doescher, 158, 263; C. S. Lai, 293, 423

- Ikeda, H. S. See A. C. Burgoon, 72
Iwasaki, T. See N. Shibuya, 252
- Jackson, E. A. See P. I. Payne, 319
Jarvis, M. G. See P. I. Payne, 319
Jeffers, H. See P. L. Finney, 170
Johnson, D. E. See B. L. Jones, 327
Johnson, V. A., P. J. Mattern, C. J. Peterson, and S. L. Kuhr. Improvement of wheat protein by traditional breeding and genetic techniques, 350
Jones, B. L., and G. L. Lookhart. High performance liquid chromatographic separation of peptides for sequencing studies, 89
_____, _____, and D. E. Johnson. Improved separation and toxicity analysis methods for purothionins, 327
_____. See G. L. Lookhart, 19, 97
- Kadan, R. S., and G. M. Ziegler, Jr. Iron status in experimental drum-dried rice foods, 154
Kaleikau, L. A. See D. B. Bechtel, 191
Kasarda, D. D. See J. A. Bietz, 309; D. Lafandra, 314
Kawamura, Y., Y. Matsumura, T. Matoba, D. Yonezawa, and M. Kito. Selective reduction of interpolypeptide and intrapolypeptide disulfide bonds of wheat glutenin from defatted flour, 279
Khan, K., A. S. Hamada, and J. Patek. Polyacrylamide gel electrophoresis for wheat variety identification: Effect of variables on gel properties, 310
Khachadourian, H. A., W. N. Sawaya, and M. I. Bayoumi. The chemical composition and rheological properties of flours milled from two major wheat varieties grown in Saudi Arabia, 416
Kito, M. See Y. Kawamura, 279
Kordonowy, R. K., and V. L. Youngs. Utilization of durum bran and its effect on spaghetti, 301
Kruger, J. E., and B. A. Marchylo. Examination of the mobilization of storage proteins of wheat kernels during germination by high-performance reversed-phase and gel permeation chromatography, 1
_____, and _____. A comparison of the catalysis of starch components by isoenzymes from the two major groups of germinated wheat α -amylase, 11
Kuhr, S. L. See V. A. Johnson, 350
Kulp, K., H. Chung, M. A. Martinez-Anaya, and W. Doerry. Fermentation of water ferments and bread quality, 55
- Lafandra, D., and D. D. Kasarda. One- and two-dimensional (two pH) polyacrylamide gel electrophoresis in a single gel: Separation of wheat proteins, 314
Lagoda, A. A. See Y. V. Wu, 470
Lai, C. S., A. B. Davis, and R. C. Hoseney. The effect of a yeast protein concentrate and some of its components on starch extrusion, 293
_____, and _____. Effect of whole yeast and various fractions on some properties of extruded starch, 423
Lai, F. S., R. Rousser, D. Brabec, and Y. Pomeranz. Determination of hardness in wheat mixtures. II. Apparatus for automated measurement of hardness of single kernels, 178
_____. See G. L. Lookhart, 185; Y. Pomeranz, 41, 108; I. Zayas, 478
Lamkin, W. M., N. D. Luginsland, and Y. Pomeranz. Detection and gas-chromatographic determination of propionic acid added as a preservative to corn, 6
Lawton, J. W., A. B. Davis, and K. C. Behnke. High-temperature, short-time extrusion of wheat gluten and a bran-like fraction, 267
Litts, J. C. See F. C. Greene, 398
Liuzzo, J. A. See E. T. Champagne, 218, 231
Lookhart, G. L. Identification of oat cultivars by combining polyacrylamide gel electrophoresis and reversed-phase high-performance liquid chromatography, 345
_____. Gliadin electrophoretic variations in foundation Arkan wheat grown at 16 Kansas agricultural experiment stations in 1983, 355
_____, and B. L. Jones. High performance liquid chromatography analysis of amino acids at the picomole level, 97
_____, and Y. Pomeranz. Characterization of oat species by polyacrylamide gel electrophoresis and high performance liquid chromatography of their prolamins, 162
_____, and _____. Gliadin high-performance liquid chromatography and polyacrylamide gel electrophoresis patterns of wheats grown with fertilizer treatments in the United States and Australia on sulfur-deficient soils, 227
_____, D. B. Cooper, and B. L. Jones. Effect of temperature and alternate lactate buffer systems on resolution of wheat gliadin proteins by polyacrylamide gel electrophoresis, 19
_____, F. S. Lai, and Y. Pomeranz. Variability in gliadin electrophoregrams and hardness of individual wheat kernels selected from foundation seed on the basis of grain morphology, 185
_____. See B. L. Jones, 89, 327
Luginsland, N. D. See W. M. Lamkin, 6
Lukow, O. M., F. Bekes, and W. Bushuk. Influence of germination on wheat quality. III. Modification of flour lipid, 419
Lupano, C. E., and M. C. Añón. Characterization of triticale protein, 174
- MacGregor, A. W. See J. E. Dexter, 75; R. J. Weselake, 120
Marchylo, B. A. See J. E. Kruger, 1, 11
Martin, C. R. See Y. Pomeranz, 108
Martin, D. G. See J. E. Dexter, 75
Martinez-Anaya, M. A. See K. Kulp, 55
Matoba, T. See Y. Kawamura, 279
Matsumura, Y. See Y. Kawamura, 279
Mattern, P. J. See V. A. Johnson, 350; Y. Pomeranz, 463
Matthews, R. H. See G. S. Ranhotra, 117, 476
Mayer, S. M. See P. L. Brady, 70
Mazza, G., and C. G. Campbell. Influence of water activity and temperature on dehulling of buckwheat, 31
McClure, B. A. See R. L. Phillips, 213
Mifflin, B. J. See A. S. Tatham, 405
Miller, F. See E. T. Champagne, 218, 231
Mizukoshi, M. Model studies of cake baking. V. Cake shrinkage and shear modulus of cake batter during baking, 242
_____. Model studies of cake baking. VI. Effects of cake ingredients and cake formula on shear modulus of cake, 247
Mohr, H. E. See L. M. Seitz, 467
Morad, M. M. See C. E. Choto, 51
Murdy, D. S., U. Singh, S. Suryaprakash, and K. D. Nicodemus. Soluble sugars in five endosperm types of sorghum, 150
- Nagao, S. See S. Endo, 272
Nagel, C. W. Application of high performance liquid chromatography to analysis of flavonoids and phenyl propenoids, 144
Nakane, R. See N. Shibuya, 252
Nicodemus, K. D. See D. S. Murty, 150
Noll, J. S. Effect of phytate, pH, and acid treatment on the falling number of sound and weathered wheats, 22
Novak, F. A. See G. S. Ranhotra, 117, 476
Nozzolillo, C. See L. S. Robert, 276
- Oh, N. H., P. A. Seib, and D. S. Chung. Noodles. III. Effects of processing variables on quality characteristics of dry noodles, 437
_____, _____, C. W. Deyoe, and A. B. Ward. Noodles. II. The surface firmness of cooked noodles from soft and hard wheat flours, 431
_____, _____, A. B. Ward, and C. W. Deyoe. Noodles. IV. Influence of flour protein, extraction rate, particle size, and starch damage on the quality characteristics of dry noodles, 441
- Paredes-López, M. M. Covarrubias-Alvarez, and J. Barquín-Carmona. Influence of nitrogen fertilization on the physicochemical and functional properties of bread wheats, 427
Patek, J. See K. Khan, 310
Payne, P. I., L. M. Holt, M. G. Jarvis, and E. A. Jackson. Two-dimensional fractionation of the endosperm proteins of bread wheat (*Triticum aestivum*): Biochemical and genetic studies, 319
Peplinski, A. J. See R. A. Anderson, 198
Perten, H. Shortening falling number analysis time for measuring the sprout damage of wheat at harvest, 474
Peterson, C. J. See V. A. Johnson, 350; Y. Pomeranz, 463
Peterson, D. M., R. H. Saigo, and J. Holy. Development of oat aleurone cells and their protein bodies, 366
Phillips, R. L., and B. A. McClure. Elevated protein-bound methionine in seeds of a maize line resistant to lysine plus threonine, 213
Pomeranz, Y. Letter from the editor, 153
_____, S. Afework, and F. S. Lai. Determination of hardness in mixtures of hard red winter and soft red winter wheats. I. Bulk samples, 41
_____, L. C. Bolte, K. F. Finney, and M. D. Shogren. Effect of variations in tempering on micromilling of hard winter wheat, 47
_____, Z. Czuchajowska, C. R. Martin, and F. S. Lai. Determination of corn hardness by the Stenvert hardness tester, 108
_____, C. J. Peterson, and P. J. Mattern. Hardness of winter wheats grown under widely different climatic conditions, 463
_____. See K. F. Finney, 83; R. L. Gaines, 25, 35; F. S. Lai, 178; W. M. Lamkin, 6; G. L. Lookhart, 162, 185, 227; I. Zayas, 478
Preston, K. R. See J. E. Dexter, 75

- Ranhotra, G. S., J. A. Gelroth, F. A. Novak, M. A. Bock, and R. H. Matthews. Retention of selected minerals in enriched pasta products during cooking, 117
- _____, _____, and R. H. Matthews. Retention of selected B vitamins in cooked pasta products, 476
- Rao, R. M. See E. T. Champagne, 218, 231
- Redlinger, P. A., C. S. Setser, and A. D. Dayton. Measurements of bread firmness using the Instron universal testing instrument: Differences resulting from test conditions, 223
- _____. See M. Stroh, 103
- Robert, L. S., C. Nozzolillo, and I. Altosaar. Characterization of oat (*Avena sativa* L.) residual proteins, 276
- Robinson, J. W. See E. T. Champagne, 218, 231
- Rooney, L. W. See C. E. Choto, 51
- Rossmagel, B. G. See A. K. Sumner, 112
- Roussier, R. See F. S. Lai, 178
- Rubenthaler, G. L. See A. M. Abboud, 124, 130
- Sahay, M. N., and S. Gangopadhyay. Effect of wet harvesting on biodeterioration of rice, 80
- Saigo, R. H. See D. M. Peterson, 366
- Sapirstein, H. D., and W. Bushuk. Computer-aided analysis of gliadin electrophoregrams. I. Improvement of precision of relative mobility determination by using a three reference band standardization, 372
- _____, and _____. Computer-aided analysis of gliadin electrophoregrams. II. Wheat cultivar identification and class comparisons, 377
- _____, and _____. Computer-aided analysis of gliadin electrophoregrams. III. Characterization of the heterogeneity in gliadin composition for a population of 98 common wheats, 392
- Sawaya, W. N. See H. A. Khachadourian, 416
- Seguchi, M. Model experiments on hydrophobicity of chlorinated starch and hydrophobicity of chlorinated surface protein, 166
- Seib, P. A. See N. H. Oh, 431, 437, 441
- Seitz, L. M., W. T. Yamazaki, R. L. Clements, H. E. Mohr, and L. Andrews. Distribution of deoxynivalenol in soft wheat mill streams, 467
- _____. See D. B. Bechtel, 191
- Setser, C. S. See P. A. Redlinger, 223; M. Stroh, 103
- Sexson, K. R. See Y. V. Wu, 470
- Shewry, P. R. See A. S. Tatham, 405
- Shibuya, N., R. Nakane, A. Yasui, K. Tanaka, and T. Iwasaki. Comparative studies on cell wall preparations from rice bran, germ, and endosperm, 252
- Shogren, M. D. See K. F. Finney, 83; Y. Pomeranz, 47; M. Stroh, 103
- Singh, U. See D. S. Murty, 150
- Skeggs, P. K. Mechanical dough development—Dough water level and flour protein quantity, 458
- Storey, C. L. See R. A. Anderson, 198
- Stroh, M., C. S. Setser, B. Bruinsma, M. Shogren, and P. A. Redlinger. Sensory interactions of formulations to mask potassium chloride flavor using Morton Lite Salt mixture in white pan breads, 103
- Stroshine, R. See A. Fernandez, 137
- Sumner, A. K., A. Gebre-Egziabher, R. T. Tyler, and B. G. Rossmagel. Composition and properties of pearled and fines fractions from hulled and hull-less barley, 112
- Suryaprakash, S. See D. S. Murty, 150
- Tanaka, K. See S. Endo, 272; N. Shibuya, 252
- Tanner, S. N. See A. C. Burgoon, 72
- Tatham, A. S., B. J. Mifflin, and P. R. Shewry. The beta-turn conformation in wheat gluten proteins: Relationship to gluten elasticity, 405
- Thacker, P. A. See M. Fenton, 67
- Tipples, K. H. See J. E. Dexter, 75
- Tuite, J. See A. Fernandez, 137
- Tyler, R. T. See A. K. Sumner, 112
- VanCauwenberge, J. E. Fermentation of field corn at varying stages of maturation, 66
- Walker, C. E. See C. F. Fernandes, 413
- Ward, A. B. See N. H. Oh, 431, 441
- Weslake, R. J., A. W. MacGregor, and R. D. Hill. Endogenous alpha-amylase inhibitor in various cereals, 120
- Wilson, C. M. A nomenclature for zein polypeptides based on isoelectric focusing and sodium dodecyl sulfate polyacrylamide gel electrophoresis, 361
- Wu, Y. V., K. R. Sexson, and A. A. Lagoda. Protein-rich alcohol fermentation residues from corn dry-milled fractions, 470
- Yamazaki, W. T. See L. M. Seitz, 467
- Yasui, A. See N. Shibuya, 252
- Yonezawa, D. See Y. Kawamura, 279
- Youngs, V. L. See R. K. Kordonowy, 301
- Zawistowska, U., F. Bekes, and W. Bushuk. Gluten proteins with high affinity to flour lipids, 284
- _____, _____, and _____. Involvement of carbohydrates and lipids in aggregation of glutenin proteins, 340
- Zayas, I., Y. Pomeranz, and F. S. Lai. Discrimination between Arthur and Arkan wheats by image analysis, 478
- Ziegler, G. M., Jr. See R. S. Kadan, 154
- Zylema, B. J., J. A. Grider, J. Gordon, and E. A. Davis. Model wheat starch systems heated by microwave irradiation and conduction with equalized heating times, 447

Subject Index

Page numbers of errata are in *italics*.

Acknowledgment of reviewers, v

- Alcohol, grain, maturation effect on (VanCauwenberge), 66
- Amino acids, analysis by HPLC (Lookhart and Jones), 97
- α -Amylase
- accurate quantification by falling number method (Finney), 258
 - effect of isoenzymes in catalyzing breakdown of starch components (Kruger and Marchylo), 11
 - inhibitor in barley, wheat, rye, and triticale (Weslake et al), 120

Baking

- bread, thermophilic yeasts (Fernandes et al), 413
- bread firmness measured by Instron universal testing instrument (Redlinger et al), 223
- bread flavor using Lite Salt mixture (Stroh et al), 103
- bread quality of frost damaged red spring wheat (Dexter et al), 75
- cake
 - effect of varying flour protein content on size and tenderness of angel food and white layer cakes (Gaines and Donelson), 63
 - influence of flour quality parameters and postmilling treatments on size of angel food and white layer (Gaines and Donelson), 60
 - ingredients and formula on shear modulus (Mizukoshi), 247
 - shrinkage and shear modulus (Mizukoshi), 238
 - volume relationship with wheat and flour quality factors (Gaines), 290

cookie

- evaluating spread potential of whole wheat flours from soft wheat cultivars (Gaines and Donelson), 134
- size relationship with wheat and flour quality factors (Gaines), 290
- Do-Corder to study dough development (Endo et al), 272
- quality affected by water level and flour protein quantity (Skeggs), 458

Barley

- α -amylase inhibitor in (Weslake et al), 120
- composition and properties of pearled and fines fractions of (Sumner et al), 112
- hull-caryopsis attachment (Gaines et al), 35

Bran

- durum-, effect on spaghetti (Kordonowy and Youngs), 301
- rice-, mineral, protein, phytic acid interactions (Champagne et al), 231
- solubility behaviors of minerals, proteins, and phytic acid (Champagne et al), 218

Bread and breadmaking

- changes in dietary fiber complex during fermentation (Frølich and Asp), 238
- at elevated temperatures (Fernandes et al), 413
- from European wheats grown in Europe and Kansas (Finney et al), 83
- fermentation of water ferments (Kulp et al), 55

- firmness measured by Instron universal testing instrument (Redlinger et al), 223
- quality affected by whole wheat varieties and flour granulation (Finney et al), 170
- relation of quality to lipid content (Lukow et al), 419
- sensory interactions of formulations to mask KCl flour in (Stroh et al), 103
- textural attributes of French and rye breads (Brady and Mayer), 70
- Buckwheat, dehulling of, influence of water activity and temperature (Mazza and Campbell), 31, 230
- Cakes and cookies**
- cakes
- effect of varying flour protein content on size and tenderness of angel food and white layer (Gaines and Donelson), 63
 - influence of flour quality parameters and postmilling treatments on angel food and white layer (Gaines and Donelson), 60
 - ingredients and formula on shear modulus (Mizukoshi), 247
 - shrinkage and shear modulus (Mizukoshi), 242
 - volume relationship with wheat and flour quality factors (Gaines), 290
- cookies
- effect of sugar type and flour moisture on surface cracking (Doescher and Hosney), 263
 - evaluating spread potential of whole wheat flours from soft wheat cultivars (Gaines and Donelson), 134
 - factors affecting flour quality (Abboud et al), 130
 - size relationship with wheat and flour quality factors (Gaines), 290
 - sugar-snap, effect of fat and sugar (Abboud et al), 124
- Carbohydrates**
- of cell wall preparation from different part of rice grain (Shibuya et al), 252
 - endogenous effect on aggregation of glutenin proteins (Zawistowska et al), 340
- Chromatography, rapid wheat varietal identification through gliadin RP-HPLC (Bietz and Cobb), 332**
- Computer analysis of gliadin electrophoregrams**
- band classification and heterogeneity (Sapirstein and Bushuk), 392
 - methodology to improve relative mobility precision (Sapirstein and Bushuk), 372
 - wheat cultivar identification (Sapirstein and Bushuk), 377
- Corn**
- detection and gas-chromatographic determination of propionic acid as a preservative (Lamkin et al), 6
 - deterioration during storage at high moistures (Fernandez et al), 137
 - dry-milled fractions, fractionation and composition (Wu et al), 470
 - field-, fermentation of (VanCauwenberge), 66
 - fumigated with ethylene dibromide (Anderson et al), 198
 - hardness determined by Stenvert hardness tester (Pomeranz et al), 108
 - proteins in, HPLC for (Bietz), 201
- Crackers, baking procedure (Doescher and Hosney), 158**
- Dehulling, of buckwheat, influence of water activity and temperature (Mazza and Campbell), 31, 230**
- Deoxynivalenol, distribution in soft wheat mill streams (Seitz et al), 467**
- Disulfide, of wheat glutenin, selective reduction of (Kawamura et al), 279**
- Dough**
- development, Do-Corder to study (Endo et al), 272
 - water level effect on protein response (Skeggs), 458
- Electron microscopy, of wheat scab (Lookhart et al), 185**
- Electrophoresis**
- computerized wheat cultivar identification (Sapirstein and Bushuk), 377
 - of foundation wheat seed (Lookhart et al), 185
 - of gliadins (Khan et al), 310
 - from different wheat classes as affected by temperature and buffer systems (Lookhart et al), 19
 - one- and two-dimensional separations (Lafiandra and Kasarda), 314
 - gradient SDS-PAGE of glutenin proteins (Zawistowska et al), 340
 - pasta, detection of adulteration (Burgoon et al), 72
 - standardization and improved relative mobility precision (Sapirstein and Bushuk), 372
 - study of gliadin heterogeneity in a population of common wheats (Sapirstein and Bushuk), 392
 - of tritcale endosperm and germ protein fractions (Lupano and Añón), 174
 - two-dimensional, of wheat endosperm protein (Payne et al), 319
 - of zein (Wilson), 361
- Enzymes**
- α -amylase measured by falling number method (Finney), 258
 - comparison of two major α -amylase groups in catalysis of starch components (Kruger and Marchylo), 11
 - endo- β -glucanase purification (Ballance), 148
 - hydrolysis of purothionins by (Jones and Lookhart), 89
- Errata**
- Kroll (vol. 61, p. 490), 230
 - Mazza and Campbell (vol. 62, p. 31), 230
 - Peng et al (vol. 61, p. 487), 418
 - Table of Contents (vol. 61, p. i), vi
- Ethanol, from fermented corn dry-milled fractions (Wu et al), 470**
- Extrusion cooking, wheat gluten processed by (Lawton et al), 267**
- Extrusion processing of starch, effect of whole yeast and various fractions (Lai et al), 423**
- Falling number**
- effect of pH, phytate, and acid treatment on sound and weathered wheat (Noll), 22
 - measurement of α -amylase (Finney), 258
 - shortening, analysis time for measuring sprout damage of wheat at harvest (Perten), 474
- Fermentation**
- of corn dry-milled fractions (Wu et al), 470
 - of field corn (VanCauwenberge), 66
 - of water ferments and bread quality (Kulp et al), 55
- Fertilization, nitrogen fertilizer influence on bread properties (Paredes-López et al), 427**
- Fiber, dietary, changes during fermentation and baking (Frølich and Asp), 238**
- of rice grain, chemical properties (Shibuya et al), 252
- Flour**
- cake; effect on shear modulus (Mizukoshi), 247
 - evaluation of tests for cookie flour quality (Abboud et al), 124
 - from germinated wheat; lipid composition and content (Lukow et al), 419
 - surface firmness of noodles made from (Oh et al), 431
 - wheat-, chemical composition and rheological properties of two Saudi Arabian varieties (Khachadourian et al), 416
- Fractionation, of barley by abrasive milling (pearling) (Sumner et al), 112**
- Gas chromatography, of propionic acid in corn (Lamkin et al), 6**
- Gelatinization, sound and weathered whole meal flours, effect of phytate, pH, α -amylase, and acid treatment (Noll), 22**
- Genetics, gene location of wheat endosperm proteins (Payne et al), 319**
- Germination**
- effect of storage at high moisture on decrease (Fernandez et al), 137
 - of wheat
 - analyses of changes in proteins by HPLC (Kruger and Marchylo), 1
 - effect on lipid content and composition (Lukow et al), 419
 - effects of fungal infection (Lookhart et al), 185
 - to measure α -amylase (Finney), 258
- Gliadin**
- computer-aided comparative analysis of electrophoregrams, cultivar identification (Sapirstein and Bushuk), 377
 - effect of temperature and buffer systems on PAGE patterns (Lookhart et al), 19
 - electrophoregrams of individual seeds (Lookhart et al), 185
 - electrophoretic heterogeneity in a population of common wheats (Sapirstein and Bushuk), 392
 - electrophoretic variations in Kansas wheat (Lookhart), 355
 - genes; structure and expression of (Greene et al), 398
 - multiple reference band standardization of gel electrophoregrams (Sapirstein and Bushuk), 372
 - rapid wheat varietal identification through RP-HPLC (Bietz and Cobb), 332
 - separation by one- and two-dimensional PAGE (Lafiandra and Kasarda), 314
 - separation by PAGE (Khan et al), 310
 - two-dimensional fractionation (Payne et al), 319
- β -D-Glucan, purification of a specific endo- β -glucanase for quantitation of (Ballance), 148**
- Gluten**
- protein conformation and elasticity (Tatham et al), 405
 - wheat
 - processing by extrusion (Lawton et al), 267
 - proteins with high affinity to flour lipids (Zawistowska et al), 284
- Glutenin**
- proteins; presence of endogenous carbohydrates and lipids in (Zawistowska et al), 340
 - selective reduction of interpolypeptide and intrapolypeptide disulfide bonds of wheat (Kawamura et al), 279
 - two-dimensional fractionation (Payne et al), 319

- HPLC** (high-performance liquid chromatography)
for analysis of amino acids at the picomole level (Lookhart and Jones), 97
determination of anthocyanidins, hydroxycinnamate esters, catechins, and proanthocyanidins (Nagel), 144
gliadins of wheats grown on sulfur-deficient soils (Lookhart and Pomeranz), 227
for identification of oat cultivars, combined with PAGE (Lookhart), 345
proteins in cereals (Bietz), 201
rapid wheat varietal identification through gliadin analysis (Bietz and Cobb), 332
reversed-phase; of avenin proteins (Lookhart and Pomeranz), 162
separation of peptides (Jones and Lookhart), 89
separation of purothionins (Jones et al), 327
of wheat proteins; changes during germination (Kruger and Marchylo), 1
Hydrophobicity, of chlorinated starch and surface protein (Seguchi), 166
- Image analysis**, for wheat variety identification (Zayas et al), 478
- Instructions to authors**, iii
- Instruments and instrumentation**
Instron universal testing instrument for bread firmness measurements (Redlinger et al), 223
single-kernel hardness tester for wheat (Lai et al), 178
Stenvert hardness tester for determination of corn hardness (Pomeranz et al), 108
- Iron**, status in experimental drum-dried rice foods (Kadan and Ziegler), 154
- Letter from the editor** (Pomeranz), 153
- Lipids**
distribution in gluten fractions (Zawistowska et al), 284
endogenous effect on aggregation of glutenin proteins (Zawistowska et al), 340
modification during germination of wheat (Lukow et al), 419
- Maize**, methionine in seeds of (Phillips and McClure), 213
- Methods**
correlations of sensory and instrumental measures of bread texture (Brady and Mayer), 70
light and electron microscopy, quantitative image analysis, and PAGE of wheat gliadins (Gaines et al), 25
for measuring bread firmness (Redlinger et al), 223
model studies of cake baking; shear modulus (Mizukoshi), 238
purification of a *Bacillus subtilis* endo- β -glucanase (Ballance), 148
for separating light and dark kernels of winter wheat based on density (Fenton et al), 67
separation of peptides by HPLC (Jones and Lookhart), 89
shortening falling number method for measuring sprout damage of wheat at harvest (Perten), 474
toxicity analysis-, for purothionins (Jones et al), 327
- Microwave heating**, starch-water model systems (Zylema et al), 447
- Milling**
abrasive, of barley (Sumner et al), 112
associations among various soft wheat flour quality factors and milling quality (Gaines), 290
dry and wet, milled corn fractions from corn treated with ethylene dibromide (Anderson et al), 198
of hard red spring wheat; effect of frost damage (Dexter et al), 75
influence of flour quality parameters and postmilling treatments on size of angel food and white layer cakes (Gaines and Donelson), 60
micro experimental, of wheat, (Pomeranz et al), 47
reduction of tempering time (Finney and Bolte), 454
of soft wheat; distribution of deoxynivalenol (Seitz et al), 467
- Minerals**
association to dietary fiber complex, and changes during fermentation and baking (Frølich and Asp), 238
interactions with proteins and phytic acid in rice bran (Champagne et al), 231
retention in pasta products during cooking (Ranhotra et al), 117
solubility behaviors in rice bran (Champagne et al), 218
- Moisture**
influence on CO₂ evolution and mold growth during storage (Fernandez et al), 137
wet harvesting effect on rice biodeterioration (Sahay and Gangopadhyay), 80
- Noodles**
cooked, surface firmness of (Oh et al), 431
dry
effect of flour protein, extraction rate, particle size, and starch damage on (Oh et al), 441
processing variables effect on quality (Oh et al), 437
- Oats**
aleurone cell development (Peterson et al), 366
characterization of residual proteins (Robert et al), 276
cultivar identification by combined PAGE-HPLC (Lookhart), 345
species identification by PAGE and HPLC (Lookhart and Pomeranz), 162
- PAGE** (polyacrylamide gel electrophoresis)
of avenin proteins (Lookhart and Pomeranz), 162
of gliadins of wheats grown on sulfur-deficient soils (Lookhart and Pomeranz), 227
for identification of oat cultivars, combined with HPLC (Lookhart), 345
- Particle size**
associations among flour particle size and soft wheat flour quality factors (Gaines), 290
of wheat (Pomeranz et al), 41
- Pasta**
method for detecting adulteration (Burgoon et al), 72
mineral retention during cooking (Ranhotra et al), 117
retention of B vitamins in cooked products (Ranhotra et al), 476
spaghetti, effect of durum bran on (Kordonowy and Youngs), 301
- Phytic acid**
fate during fermentation and baking (Frølich and Asp), 238
interactions with minerals and proteins in rice bran (Champagne et al), 231
solubility behaviors in rice bran (Champagne et al), 218
- Prolamin**, wheat
rapid varietal identification through RP-HPLC analysis of gliadin proteins (Bietz and Cobb), 332
secondary structure (Tatham et al), 405
two-dimensional fractionation (Payne et al), 319
- Propionic acid**, detection and gas-chromatographic determination in corn (Lamkin et al), 6
- Protein**
analysis from maize, responses to lysine plus threonine inhibition (Phillips and McClure), 213
associations among protein content and soft wheat flour quality factors (Gaines), 290
bodies; development in oat aleurone (Peterson et al), 366
in cereals, HPLC for (Bietz), 201
characterization of triticle endosperm and germ proteins (Lupano and Añón), 174
chlorinated surface-, hydrophobicity of (Seguchi), 166
corn-, zein, isoelectric focusing and electrophoresis (Wilson), 361
effect of varying flour protein content on size and tenderness of angel food and white layer (Gaines and Donelson), 63
flour-, water level and baking quality (Skeggs), 458
gliadin analysis by PAGE (Lookhart et al), 19
gliadin separated by PAGE (Khan et al), 310
gluten-, separation and characterization by PAGE, SDS-PAGE; amino acid composition, lipid content (Zawistowska et al), 284
interactions with minerals and phytic acid in rice bran (Champagne et al), 231
method to detect nondurum proteins by electrophoresis (Burgoon et al), 72
oat residual-, characterization of (Robert et al), 276
rapid wheat varietal identification through RP-HPLC analysis of gliadins (Bietz and Cobb), 332
solubility behaviors in rice bran (Champagne et al), 218
wheat hardness effect on content (Pomeranz et al), 463
wheat
breeding techniques (Johnson et al), 350
changes during germination (Kruger and Marchylo), 1
- Purothionins**, separation by HPLC and toxicity analysis of (Jones et al), 327
- Rheology**
cake; shear modulus during baking (Mizukoshi), 242
changes in cracker sponges (Doeschner and Hosney), 158
Do-Corder to study dough development (Endo et al), 272
of dough made from two Saudi Arabian wheat flour varieties (Khachadourian et al), 416
sensory and instrumental texture profile analyses of bread texture (Brady and Mayer), 70
- Rice**
biodeterioration of, effect of wet harvesting (Sahay and Gangopadhyay), 80
bran
mineral, protein, phytic acid interactions (Champagne et al), 231

- solubility behaviors of minerals, proteins, and phytic acid (Champagne et al), 218
- cell wall, from different part of the grain, chemical properties (Shibuya et al), 252
- drum-dried foods, iron status in (Kadan and Ziegler), 154
- Rye, α -amylase inhibitor in (Weselake et al), 120
- Scanning electron microscopy, microwave heated starch (Zylema et al), 447
- Sorghum, soluble sugars in endosperm variants (Murty et al), 150
- Starch
- catalysis of, by isoenzymes from two major groups of germinated wheat α -amylase (Kruger and Marchylo), 11
 - chlorinated-, hydrophobicity of (Seguchi), 166
 - effect of whole yeast and various fractions on properties of (Lai et al), 423
 - extrusion processing with yeast protein concentrate (Lai et al), 293
 - microwave heating (Zylema et al), 447
- Storage, CO₂ as measure of mold growth during storage (Fernandez et al), 137
- Sugar
- in cake
 - effect on shear modulus (Mizukoshi), 247
 - effect on shrinkage and shear modulus (Mizukoshi), 238
 - effect of sugar type on surface cracking of sugar cookies (Doescher and Hosney), 263
 - soluble, in sorghum (Murty et al), 150
- Symposium, introduction to; protein improvement in cereals and oilseeds through traditional and modern genetic approaches (Bietz and Kasarda), 309
- Tortillas, sorghum and maize processing (Choto et al), 51
- Toxicity, of purothionins to insect cells (Jones et al), 327
- Triticale
- α -amylase inhibitor in (Weselake et al), 120
 - characterization of triticale endosperm and germ proteins (Lupano and Añón), 174
- Ultrastructure, of barley (Gaines et al), 35
- Vitamins, B, retention in cooked pasta products (Ranhotra et al), 476
- Wheat
- α -amylase activity in (Finney), 258
 - α -amylase inhibitor in (Weselake et al), 120
 - α -amylase isoenzymes, effect on starch components (Kruger and Marchylo), 11
 - chemical composition and rheological properties of flour from two Saudi Arabian varieties (Khatchadourian et al), 416
 - computer-based cultivar identification, class discrimination by electrophoregrams (Sapirstein and Bushuk), 377
 - damage
 - effect of frost on quality of hard red spring (Dexter et al), 75
 - to sprouts, shortening falling number analysis time for measuring (Pertén), 474
 - durum, method to detect other wheats in durum products (Burgoon et al), 72
 - effect of nitrogen fertilization on bread properties (Paredes-López et al), 427
 - electrophoresis, of gliadins
 - HPLC and PAGE patterns, in USA and Australia (Lookhart and Pomeranz), 227
 - 314
 - relative mobility standardization methodology (Sapirstein and Bushuk), 372
 - variations in (Lookhart), 355
 - electrophoretic heterogeneity, characterized by computer (Sapirstein and Bushuk), 392
 - electrophoretic patterns of different wheat classes (Lookhart et al), 19
 - functional properties of, grown in Europe and Kansas (Finney et al), 83
 - germ; varietal effect on bread quality (Finney et al), 170
 - germination effect on flour lipid (Lukow et al), 419
 - gluten proteins
 - gluten elasticity relation (Tatham et al), 405
 - with high affinity to flour lipids (Zawistowska et al), 284
 - glutenin, selective reduction of interpolypeptide and intrapolypeptide bonds (Kawamura et al), 279
 - hard red spring, effect of frost damage on quality (Dexter et al), 75
 - hard winter, method for separating light and dark kernels based on density (Fenton et al), 67
 - hardness of (Pomeranz et al), 463
 - individual kernels, comparison with grain morphology and electrophoregrams (Lookhart et al), 185
 - wheat mixtures (Pomeranz et al), 41
 - hardness determination, apparatus for (Lai et al), 178
 - high-protein amphipoloid-, endosperm structural and biochemical differences between (Gaines et al), 25
 - HPLC for analysis of protein changes during germination (Kruger and Marchylo), 1
 - micromilled, reduction of tempering time (Finney and Bolte), 454
 - micromilling of, effect of variations in tempering (Pomeranz et al), 47
 - protein biosynthesis in (Greene et al), 398
 - protein
 - breeding and genetic techniques for (Johnson et al), 350
 - HPLC for (Bietz), 201
 - scab, effects on kernel structure (Lookhart et al), 185
 - soft-, distribution of deoxynivalenol in mill streams (Seitz et al), 467
 - sound and weathered-, effect of pH, phytate, and acid treatment on falling number of (Noll), 22
 - sprout damage of, shortening falling number analysis time for measuring (Pertén), 474
 - two-dimensional fractionation of wheat endosperm protein (Payne et al), 319
 - variety identification
 - by image analysis (Zayas et al), 478
 - through RP-HPLC analysis of gliadins (Bietz and Cobb), 332
 - computer-based, by electrophoregrams (Sapirstein and Bushuk), 377
- Yeast
- effect on extruded starch (Lai et al), 423
 - fermentation effects on bread quality (Kulp et al), 55
 - protein concentration and extrusion with starch (Lai et al), 293
 - thermophilic-, for bread baking (Fernandes et al), 413
- Zein, nomenclature for isoelectric focusing and electrophoresis (Wilson), 361

